

ABSTRACT OF THE DISCLOSURE

A method for using ammonium fluoride solution in a photoelectrochemical etching process of a silicon wafer, comprising steps of: placing a wafer after the
5 pre-etching process into an alcohol solution for activating the surface of wafer
and into an ammonium fluoride solution as an etching solution; and
illuminating the back of wafer with a halogen light and performing a
photoelectrochemical etching process in a potentiostatic.